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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,047	02/21/2002	Katsuya Sakayori	123801	9304
25944 7590 01/25/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			EXAMINER HAIDER, SAIRA BANO	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 01/25/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/069,047

Applicant(s)

SAKAYORI ET AL.

Examiner

Saira Haider

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/30/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42,44-48,50-55 and 57-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42,44-48,50-55 and 57-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/27/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 10/30/2007 has been entered.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

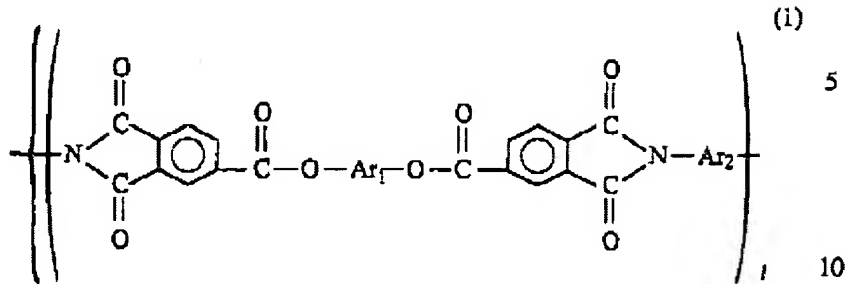
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 42, 44, 45, 47, 48, 50-55, 57-65 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okamoto et al. (US 5,621,068).

4. Okamoto discloses a polyimide laminate comprising thermoplastic polyimide polymer layers being laminated on both surfaces of a nonthermoplastic polyimide film. The laminate can be used for the base film of a cover-lay film having adhesive-agent layer and a flexible copper-coated laminated board (col. 30, lines 15-30). The inventive thermoplastic polyimide polymer layer is formed of a polyimide resin comprising repeat units of:

General formula (i)



Wherein, Ar₁ and Ar₂ are divalent organic radicals (abstract; col. 2, line 59 to col. 3, line 43).

5. Thus, the Okamoto reference discloses the claimed polyimide film (as per herein claim 64). Okamoto discloses APICAL, pyromellitic dianhydride based polyimide, as a suitable nonthermoplastic polyimide film (col. 20, lines 40-46). It is noted that applicant recognizes pyromellitic dianhydride based polyimides as a layer present in the insulating layer. Okamoto exemplifies peeling strengths of greater than 300 g/cm (0.3kg/cm) (Table 1).

6. In reference to the claimed limitations regarding the etching rate ratios, wherein the etching solution is an alkali-aliphatic amine solution comprising monoethanol amine, it is noted that these limitations are rendered properties of the claimed first and second resin layers.

7. Since the prior art teaches the identical chemical structures of the layers comprising the claimed insulating layer, the properties applicant claims (etching rate ratios) are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The burden shifts to the applicant to show an unobvious difference. Note, that because the reference does not expressly teach or address the properties of the claimed invention, does not mean that the properties are not inherently disclosed. Disclosing the same compound(s) inherently discloses the corresponding

properties. The references cannot possibly address all of the properties, but implicitly all of the properties are present.

8. Claims 52-54 and 61-63 are recognized as product-by-process claims, wherein even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP § 2133.

9. Wherein the claimed product appears to be the same or similar to that of the prior art, although produced by a different process. The Okamoto flexible printed circuit boards are produced by an alkaline etching process (col. 21, lines 49-56). Okamoto fails to disclose that wet etching is utilized, however, since the resulting laminate of the prior art and that claimed comprise the identical chemical structures in each of the layers, the prior art product is deemed to be the same as or similar to the claimed product. The Okamoto reference fails to employ inorganic nitride or inorganic fluoride layers, thus, it is the examiner's position that the reference teaches the absence of such layers.

10. In reference to the claims drawn to a suspension for a hard disk drive, these limitations in the preamble reciting the intended use of the claimed invention have been evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. It is the examiners position that a structural difference does not exist. Specifically, the Okamoto product does not structurally differ from the claimed product. Therefore, since a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

11. In regards to the 103 rejection of the claims, as noted above, the claimed property of etching rate ratios is considered inherent to the product of Okamoto. However, the presently claimed function of etching ratios would obviously have been present once the Okamoto laminate is provided. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1997).

Claim Rejections - 35 USC § 103

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US 5,621,068).

14. Okamoto fails to disclose the thickness ratio of the core insulating layer to each of the adhesive layers; however Okamoto recognizes that the thickness of the adhesive component of the cover layer film alters the performance of the flexible printed circuit board. Thus, the claimed thickness ratios are rendered result effective variables because changing them will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that “discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.” See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

15. In view of this, it would have been obvious to one of ordinary skill in the art to control and modify the thickness ratios and utilize ratios of at the least 1:1 in order to produce a desired flexible printed circuit board.

Response to Arguments

16. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

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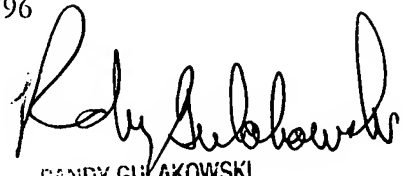
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Haider whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saira Haider
Examiner
Art Unit 1796


RANDY GULAKOWSKI
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